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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,624	07/06/2005	Joerg Sabczynski	DE030003US1	8349
24737 7590 01/10/2008 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			EXAMINER BOR, HELENE CATHERINE	
			ART UNIT 3768	PAPER NUMBER
			MAIL DATE 01/10/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/541,624

Applicant(s)

SABCZYNSKI ET AL.

Examiner

Helene Bor

Art Unit

3768

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,4-9,11-13 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-9,11-13 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/07/2007 has been entered.

### ***Claim Objections***

2. Claim 1 & 4-9 are objected to because of the following informalities: Claim 1 is a method claim reciting steps within the method. However, the claim language is directed as "detection of..." and "selection of...". A more appropriate language would be a positive recitation of the method steps such as "detecting a..." and "selecting at...". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claim 1, 4-9, 12-13 & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strommer'375 (US Patent No. 2002/0049375 A1) and further in view of Nehrke'115 (US Patent Application No. 2002/0026115 A1).

**Claim 1, 11 & 17:** Strommer'375 teaches a method of tracking an instrument that is inserted into the body of a patient (abstract). Strommer'375 also teaches the procedure of detecting an organ timing signal [movement signal] of the inspected organ, detecting a plurality of two-dimensional images of the inspected organ using an image detector, and detecting the location and orientation of the image detector (Page 3, Para 0033).

Strommer'375 teaches displaying an image sequence of a moving inspected organ and each image in the image sequence is associated with the location and the orientation of the image within a predetermined coordinate system (Page 3, Para 0036).

Strommer'375 further teaches selecting one of the previously stored two-dimensional images according to a real-time reading of the organ timing signal and displaying the selected two-dimensional image (Page 3, Para 0036). Strommer'375 teaches a method detecting a real time two-dimensional image of the inspected organ, detecting the location and orientation of the image detector, and detecting the location and orientation of the surgical tool (Page 4, Para 0043). Strommer'375 teaches a method wherein the position of the instrument is represented superimposed [superposed] on the selected 2D images (Page 4, Para 41). Strommer'375 teaches determining the location and

orientation of the instrument and using that information in association [interpolation] with the organ timing signal [motion compensation] and reconstructs an image (Page 4, Para 0038). Strommer'375 also teaches using a respiratory rate monitor (Page 10, Para 0149). Strommer'375 also teaches using pre-stored images (Page 3, Para 0032). Strommer'375 fails to teach both the movement signal comprising of both an electrocardiogram movement signal and a breathing movement signal. However, Strommer'375 does teach that it is within the skill of one in the art to select the appropriate medical monitoring device selected according to the inspected organ (Page 10, Para 0149). Nehrke'115 teaches that heart motion is a result of the cardiac cycle and respiratory motion (Page 1, Para 0014). Therefore it would have been within the skill of one in the art to use both the ECG monitor and the respiratory monitor when inspecting the heart as taught by Strommer'375 to compensate for the cardiac movement cause by the respiratory motion and the cardiac motion as explained by Nehrke'115 in order to have a more accurate motion compensation (Page 1, Para 005).

**Claim 4:** Strommer'375 teaches 2D images from a single movement phase are available for selection from the image database (Page 18, Para 0245). Strommer'375 also teaches selecting a cycle in synchrony with the ECG signal (Page 18, Page 0245).

**Claim 5:** Strommer'375 teaches a method steps b & c - e are carried out a number of times (Page 7, 0110-0111) and in varying order (Figure 10 & Figure 22).

**Claim 6:** Strommer'375 teaches a method wherein the associated image parameters in the image database for corresponding 2D images include various projection directions (Page 7, Para 0110-0111 & Page 8, Para 0119).

**Claim 7:** Strommer'375 teaches a method wherein the 2D images are generated by means of X-radiation and/or ultrasound (Figure 12, Element 404 & Page 7, Para 0101).

**Claim 8:** Strommer'375 teaches a method wherein a sensor [reference probe] is mounted on the image detector of the two-dimensional image acquisition system (Page 6, Para 0093). Strommer'375 further teaches that the image acquisition system consists of a two-dimensional image acquisition device (Page 7, 0100) wherein the two-dimensional image acquisition device can be of any type known in the art, such as an x-ray (Page 7, Para 0101).

**Claim 9:** Strommer'375 teaches a method wherein at least one sensor [reference probe] is arranged on or in the body of the patient (Page 6, Para 0093).

**Claim 12:** Strommer'375 teaches an arrangement wherein it is designed for carrying out a method as claimed 1 (Figure 12).

**Claim 17:** Strommer'375 teaches an instrument tracking system comprising at least one reference probe positioned on at least one of the means for generating 2D images and the body (Page 6, Para 0093 & Figure 12, Element 420).

### ***Response to Arguments***

6. Applicant's arguments with respect to claim 1, 4-9, &13 & 17 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene Bor whose telephone number is 571-272-2947.

The examiner can normally be reached on M-T 8:30am-6:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

hcb

 **ERIC F. WINAKUR**  
**PRIMARY EXAMINER**